

WHAT IS CLAIMED IS:

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Sub 1  
1. A control circuit for a data recorder, wherein the data recorder records data on a recording data by emitting a laser beam against a recording medium, the control circuit comprising:

10 an interrupt control circuit for interrupting data recording when a predetermined state is detected, wherein the interruption occurs when the laser beam is generated at a relatively low power level.

15 2. The control circuit according to claim 1, wherein the data includes synch pattern data, and the interrupt control circuit interrupts data recording when the laser beam is generated at the relatively low power level in accordance with the synch pattern data.

20 3. A controller employed in a data recorder to control interruption and restart of recording data, wherein the data recorder records on a recording medium data stored in a buffer memory by emitting a laser beam against the recording medium, the laser beam being generated at a high level and a low level, the controller comprising:

25 an address memory for storing at least one of an address of the recording medium and an address of the buffer memory when data recording on the recording medium is interrupted, each address indicating a location of data when the recording interruption occurred;

30 a synchronizing circuit for sequentially reading the data recorded on the recording medium prior to the recording interruption and the data stored in the buffer memory prior to the recording interruption and synchronizing the recorded data and the stored data; and

35 a restart circuit for restarting data recording on the recording medium based on the address stored in the address

Sub A2  
memory, wherein the controller interrupts data recording when the laser beam is generated at a relatively low power level.

5 Sub B1 4. The controller according to claim 3, wherein the data includes synch pattern data, and the interrupt control circuit interrupts data recording when the laser beam is generated at the relatively low power level in accordance with the synch pattern data.

10 5. The controller according to claim 4, wherein the data is recorded in the recording medium in sector units, each sector including sector address data, and wherein the address memory stores the sector address data where the recording interruption occurred.

15 6. The controller according to claim 5, wherein the predetermined state is a state in which there is a possibility that the amount of data in the buffer memory may become null and cause the buffer memory to become empty.

20 7. A controller for a data recorder, wherein the data recorder records data on a recording medium by emitting a laser beam against the recording medium, wherein the data is formed by a plurality of sectors, each of the sectors including a synch pattern that has a predetermined number of bits representing a low level, wherein the laser beam is generated at a low power level in accordance with the low level of the synch pattern, the controller comprising:

25 Sub B5  
30 an interrupt control circuit for continuing recording until an interval between sectors appears when detecting a predetermined state and interrupting the recording operation when the laser beam is generated in accordance with the synch pattern of a sector.

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8. A method for interrupting data recording in a data recorder, wherein the data recorder records data on a recording medium by emitting a laser beam against the recording medium, and the data is formed by a plurality of sectors, each of the sectors including a synch pattern that has a predetermined number of bits representing a low level, wherein the laser beam is generated at a low power level in accordance with the low level of the synch pattern, the method comprising:

10 continuing recording until an interval between sectors appears when a predetermined state is detected; and  
interrupting the recording operation when the laser beam is generated in accordance with the synch pattern of a sector.

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9. A method for interrupting and restarting data recording in a data recorder, wherein the data recorder records on a recording medium data stored in a buffer memory by emitting a laser beam against the recording medium, the method comprising:

20 interrupting data recording when a predetermined state is detected;

25 storing in an address memory at least one of an address of the recording medium and an address of the buffer memory when data recording on the recording medium is interrupted, each address indicating a location of data when the recording interruption occurred;

30 sequentially reading the data recorded on the recording medium prior to the recording interruption and the data stored in the buffer memory prior to the recording interruption;

synchronizing the recorded data and the stored data;  
and

35 restarting data recording on the recording medium based on the address stored in the address memory, wherein

the interrupting of the data recording is performed when the laser beam is generated at a relatively low power level.

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